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Encrypter e.g. for public key cryptosystem

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Patent Family:

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EP 924895	A2	19990623	EP 98123917	A	19981216	H04L-009/30	199930 B
JP 11174955	A	19990702	JP 97347613	A	19971217	G09C-001/00	199937
JP 11231774	A	19990827	JP 9831561	A	19980213	G09C-001/00	199945
CA 2256179	A1	19990617	CA 2256179	A	19981216	H04L-009/30	199949

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Patent Details:

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Abstract (Basic): EP 924895 A2

NOVELTY - The *encrypter* has an exponent generator to generate an exponent by combining an input plaintext m and a *random* *number* r . An exponentiating device *generates* a ciphertext by exponentiating a *second* public *key* g with the exponent in a modular- n reduced residue class group, where the n is a first public key which is a composite number.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a decryption device for a public key cryptosystem, a recording medium on which there is recorded a program for executing an *encryption* process of an *encryption* device through the use of two public keys n and g , a recording medium on which there is recorded a program for executing a decryption process of an *encryption* device through the use of two public keys n and g , a recording medium on which there is recorded a program for executing an *encryption* process of an *encryption* device which uses an elliptic curve over a modular- n residue ring where the n is obtained by the Chinese remainder theorem from a public key, an elliptic curve E_p over a finite field F_p having a number p of F_p -rational points and an elliptic curve E_q over a finite field F_q having a number q of F_q -rational points, and a recording medium on which there is recorded a program for executing a decryption process of a decryption device for decrypting an input ciphertext C , where let p be an odd prime larger than 5, E_p be an elliptic curve over a finite field F_p and having a number p of F_p -rational points, its two F_p -rational points be non infinite points G_p and C_p and $\lambda (GP) - 1 \bmod p$ be a